Listing of the Claims

This Listing of the Claims replaces all prior Listings of the Claims. Please amendment the claims as set forth below.

Claims 1-26. Canceled.

27. (Previously amended) An composition comprising an isolated nucleic acid encoding a protein comprising an amino acid sequence comprising SEQ ID NO:2 or variants of SEQ ID NO:2 wherein said protein exhibits resistance to a proteinase inhibitor (PI) from Nicotiana alata.

28. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence having at least 90% sequence identity to SEQ ID NO:2 after optimum alignment.

29. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence encodes an amino acid sequence as set forth in SEQ ID NO:2.

30. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleic acid molecules comprises a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

31. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein said variant includes an N-terminal signal sequence comprising an amino acid sequence SEQ ID NO:3 or an amino acid sequence having at least 90% sequence identity to SEQ ID NO:3 after optimal alignment.

32. (Previously presented) The isolated nucleic acid molecule of Claim 27 wherein the nucleotide sequence is set forth in SEQ ID NO:5.

33. ()Previously presented The isolated nucleic acid molecule of Claim 27 wherein said variant protein comprises an amino acid other than arginine at position 192.

34. (Previously presented) The isolated nucleic acid molecule of Claim 33 wherein the variant comprises a glutamine at position 192.

35. (Previously presented) A vector comprising a nucleic acid molecule of Claim 27.

36. (Previously presented) The vector of Claim 35 wherein the vector is an expression vector.

37. (Previously presented) The vector of Claim 36 wherein the expression vector is operable in a prokaryotic cell.

38. (Previously presented) The vector of Claim 36 wherein the experssion vector is operable in a eukaryotic cell.

39. (Original) The vector of Claim 38 wherein the eukaryotic cell is an insect cell.

40. (Original) The vector of Claim 38 wherein the vector is a baculovirus vector.

41. (Previously presented) A genetically modified cell comprising a nucleic acid molecule of Claim 27.

42. (Previously presented) The genetically modified cell of Claim 41 wherein the cell is a prokaryotic cell.

43. (Previously presented) The genetically modified cell of Claim 41 wherein the cell is a eukaryotic cell.

44. (Previously presented) A method for modulating expression of a nucleic acid molecule of Claim 27 in an insect, said method comprising contacting said nucleic acid molecule with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the expression of said nucleic acid molecule.

45. (Previously presented) An isolated protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2 or a variant thereof, wherein said protein exhibits resistance to a PI from N. alata.

46. (Previously presented) The protein of Claim 45 wherein said an amino acid sequence comprises an amino acid sequence having at least 90% similarity to SEQ ID NO:2 after optimal alignment.

47. (Previously presented) The protein of Claim 45 encoded by a nucleotide sequence selected from the group consisting of SEQ ID NO:4 and SEQ ID NO:6.

48. (Previously presented) The protein of Claim 45 wherein the variant is an N-terminal signal sequence.

49. (Previously presented) The protein of Claim 48 wherein the signal sequence comprises an amino acid sequence as set forth in SEQ ID NO:3.

50. (Previously presented) The protein of Claim 45 encoded by a variant comprises an amino acid other than arginine at position 192.

51. (Previously presented) The protein of Claim 45 encoded by a variant comprises a glutamine at position 192.

52-54. Canceled.

55. (Currently amended) A genetically modified plant comprising cells capable of producing an antagonist of a protein of Claim 45 as a result of its genetic modification.

56. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a monocotyledonous plant.

57. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a dicotyledonous plant.

58. (Currently amended) The genetically modified plant of Claim 55 wherein the plant ~~products Pot1~~ produces StPot1A, wherein StPot1A comprises the amino acid sequence set forth in SEQ ID NO:81 or a sequence with at least 90% amino acid sequence identity thereto.

59. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is cotton, sweet com, tomato, tobacco, piniento, potato, sunflower, citrus, plums, sorghum, leeks, soybean, alfalfa, beans, pidgeon peas, chick peas, artichokes, curcurbits, lettuce, Dianthus (an ornamental plant), geraniums, cape gooseberry, maize, flax and linseed, alfalfa, lupins, broad beans, garden peas, peanuts, canola, snapdragons, cherry, sunflower, pot marigolds, Helichrysum (an ornamental plant), wheat, barley, oats, triticale, carrots, onions, orchids, roses and petunias.

60. (Previously presented) The genetically modified plant of Claim 55 wherein the plant is a cotton plant.

61. (Previously presented) The genetically modified plant of Claim 55 comprising a nucleic acid molecule encoding PotlA, said PotlA having the amino acid sequence set forth in SEQ ID NO:81 and/or PotlB, said PotlB having the amino acid sequence set froth in SEQ ID NO:77.

62. (Previously presented) Seeds or other reproduction material from the plant of anyone of Claim 55.

63. (Previously presented) A method for modulating activity of a protein of claim 45 in an insect, said method comprising contacting said protein with an effective amount of an agent for a time and under conditions sufficient to decrease or increase the activity of said protein.

64. (Previously presented) A composition comprising:

An antibody that binds to an active or activatable chymotrypsin from *Helicoverpa* spp., or an active or activatable variant or homolog of said chymotrypsin wherein said chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2 or an amino acid sequence having at least about 75% similarity to SEQ IID NO:2 after optimal alignment.

65. (Previously presented) The antibody of claim 64, wherein the chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2.

66. (Previously presented) The antibody of claim 64 wherein said antibody is a polyclonal antibody.

67. (Previously presented) A polynucleotide molecule comprising a sequence that is antisense to a polynucleotide encoding an active or activatable variant or homolog of said chymotrypsin wherein said chymotrypsin comprises an amino acid sequence set froth in SEEQ ID NO:2 or an amino acid sequence having at least about 75% similarity to SEQ ID NO:2 after optimal alignment.

68. (Previously presented) The antisense polynucleotide molecule of claim 67, wherein the chymotrypsin comprises an amino acid sequence set forth in SEQ ID NO:2.

69. (New) An antagonist of a protein having an amino acid sequence selected from the group consisting of SEQ ID NO:2, wherein said protein exhibits resistance to a protease inhibitor (PI) from Nicotiana alata, and wherein said antagonist comprises the amino acid sequence set forth in SEQ ID NO:81 or an amino acid sequence having at least 90% amino acid sequence identity thereto.

70. (New) The antagonist of Claim 69 wherein said antagonist comprises the amino acid sequence set forth in SEQ ID NO:81.

71. (New) A composition comprising an antagonist of Claim 69.